

Application No. 10/798,755
Response to Office Action

Customer No. 01933

R E M A R K S

Reconsideration of this application, as amended, is respectfully requested.

ALLOWABLE SUBJECT MATTER

The Examiner's indication of the allowability of the subject matter of claims 4, 8, 11 and 12 is respectfully acknowledged.

These claims, however, have not been rewritten in independent form at this time since, as set forth in detail hereinbelow, it is respectfully submitted that their parent claim 1 also recites allowable subject matter.

THE SPECIFICATION

The title of the invention has been amended to use the term "group" instead of "lump," and the specification has been amended to correct a minor informality of which the undersigned has become aware as well as to clarify that the term "group" as used in the amended claims corresponds to the term "lump" in the specification. Clearly, no new matter has been added, and it is respectfully requested that the amendments to the specification be approved and entered.

THE CLAIMS

Claims 1, 2, 4-6, 8, 9, 11 and 12 have been amended to more

Application No. 10/798,755
Response to Office Action

Customer No. 01933

clearly and positively recite the features of the present invention in better U.S. form.

In addition, claim 2 has been amended to clarify the features of the present invention whereby each of the inspection/manufacturing apparatuses has a plurality of types of inspection functions; and whereby the change section of the management computer selects at least one of the inspection functions, and changes only the selected at least one inspection function when changing the operation conditions of the at least a plurality of the inspection/manufacturing apparatuses as a group. See the disclosure in the specification at, for example, page 21, line 20 to page 23, line 9.

Claim 5 has been amended to clarify the features of the present invention whereby, when at least one of the inspection/manufacturing apparatuses is specified on the arrangement layout drawing, the display section of the management computer displays each said specified inspection/manufacturing apparatus in a different conformation than unspecified inspection/manufacturing apparatuses which are not specified in different conformations in the arrangement layout drawing.

Claim 6 has been amended to clarify the features of the present invention whereby, when at least one of the inspection/manufacturing apparatuses is specified on the arrangement layout drawing, the display section of the management computer extracts

Application No. 10/798,755
Response to Office Action

Customer No. 01933

and displays the maintenance information corresponding to the at least one specified inspection/manufacturing apparatus, and displays each specified inspection/manufacturing apparatus in a different conformation than unspecified inspection/manufacturing apparatuses in the arrangement layout drawing. See, for example, Fig. 6 and the disclosure in the specification at, for example page 18, line 6 to page 19, line 19 and page 29, line 20 to page 30, line 17.

And claim 9 has been amended to clarify the features of the present invention whereby the at least a plurality of inspection/manufacturing apparatuses are classified for changing the corresponding operation conditions one of: by apparatus, by apparatus category, and by inspection/manufacturing line, the display section displays the operation conditions corresponding to the classified inspection/manufacturing apparatuses in a display column, the operation conditions are one of set and rearranged via manipulation of the display column, and the change section rewrites the operation conditions of the classified inspection/manufacturing apparatuses as a group. See the disclosure in the specification at, for example, page 19, line 20 to page 22, line 6.

No new matter has been added, and it is respectfully requested that the amendments to the claims be approved and entered.

Application No. 10/798,755
Response to Office Action

Customer No. 01933

It is respectfully submitted, moreover, that the amendments to claims 1, 4, 8, 11 and 12 are clarifying in nature only and are not related to patentability, and do not narrow the scope of these claims either literally or under the doctrine of equivalents.

THE PRIOR ART REJECTION

Claims 1-3, 5-7, 9 and 10 were rejected under 35 USC 103 being obvious in view of the combination of USP 6,463,350 ("Fukuda et al") and USP 6,788,990 ("Yanaru et al"). This rejection, however, is respectfully traversed.

According to the present invention as recited in independent claim 1, the group management apparatus comprises, in particular, sensor units for acquiring maintenance information concerning maintenance target items of the respective inspection/manufacturing apparatuses. As described in the specification at page 33, lines 22-25, for example, the maintenance target items could be a lamp, a suction pad, a motor, a ball screw, a belt (timing belt), a cable in a caterpillar, a monitor or other items.

And according to the present invention as recited in independent claim 1, the notification section intensively manages the maintenance information from each sensor unit of each

Application No. 10/798,755
Response to Office Action

Customer No. 01933

inspection/manufacturing apparatus as a group, monitors the maintenance information of the respective inspection/manufacturing apparatuses in order to predict a problem, and issues a warning at a time of occurrence of the problem.

The Examiner asserts that Fukuda et al discloses sensor units for acquiring maintenance information of maintenance target items of inspection/manufacturing apparatuses at column 4, lines 6-8 thereof. And the Examiner asserts that Fukuda et al shows this feature of the present invention in Figs. 2 and 8 thereof.

It is respectfully submitted, however, that Fukuda et al merely discloses determining an operating state of the production apparatuses as, for example, "in treatment, in maintenance, out of order and so on." And it is respectfully submitted that the "MAINTENANCE" indicator in Figs. 2 and 8 of Fukuda et al merely shows that the determined operating state is displayed on the display apparatus of Fukuda et al.

It is respectfully submitted that the operating states of the apparatuses referred to by the Examiner in Fukuda et al clearly do not correspond to maintenance information of maintenance target items of inspection/manufacturing apparatuses as recited in claim 1. Indeed, it is respectfully submitted that even if the operating states of Fukuda et al could be termed

Application No. 10/798,755
Response to Office Action

Customer No. 01933

"maintenance information" as asserted by the Examiner, the operating states described by Fukuda et al are merely general states of the apparatuses 1. That is, Fukuda et al merely discloses identifying that an apparatus 1 is "in maintenance," as pointed out by the Examiner. And it is respectfully submitted that this feature of Fukuda et al clearly does not correspond to maintenance information about specific maintenance target items (i.e. parts) of the apparatuses.

In addition, it is respectfully submitted that Fukuda et al clearly does not disclose monitoring the maintenance information of the respective inspection/manufacturing apparatuses in order to predict a problem, in the manner of the notification section of the claimed present invention as recited in claim 1.

By contrast, it is respectfully submitted that Fukuda et al merely discloses displaying the operating states of the apparatuses 1. Therefore, as pointed out by the Examiner, Fukuda et al displays "OUT OF ORDER" on the display apparatus when an apparatus is out of order. And it is respectfully submitted that merely displaying an "OUT OF ORDER" message, or merely displaying an "indicating window" as shown in Fig. 8 of Fukuda et al, does not correspond to monitoring maintenance information to predict a problem.

Indeed, it is respectfully submitted that the management computer 5 of Fukuda et al does not "monitor" the status

Application No. 10/798,755
Response to Office Action

Customer No. 01933

indicator "MAINTENANCE" in Figs. 2 and 8 of Fukuda et al, which the Examiner asserts corresponds to the maintenance information of the claimed present invention. And it is respectfully submitted that even if the management computer 5 of Fukuda et al could be said to "monitor" the "MAINTENANCE" indicator, the management computer 5 clearly does not predict any problems in the apparatuses 1, in the manner of the notification section of the claimed present invention as recited in claim 1.

According to the present invention as recited in independent claim 1, moreover, the display section displays on a same display screen of a monitor device: (i) at least one of each said information item of the operation conditions of the respective inspection/manufacturing apparatuses, and each said maintenance information item, and (ii) an arrangement layout drawing of the inspection/manufacturing apparatuses.

The arrangement layout drawing of the inspection/manufacturing apparatuses is shown, for example, in Fig. 6 (area V_2). This feature of the claimed present invention enables the location of a target apparatus in the factory to be determined at a glance using the arrangement layout drawing.

It is respectfully submitted, however, that Fukuda et al clearly does not disclose, teach or suggest this feature of the present invention as recited in independent claim 1. Therefore,

Application No. 10/798,755
Response to Office Action

Customer No. 01933

it is respectfully submitted that it is not possible to easily determine the position of a failed apparatus using the display disclosed by Fukuda et al. Rather, with the system of Fukuda et al an operator must search for the failed apparatus based on the "name" of the apparatus.

It is respectfully submitted, moreover, that the "operating states" listed in Figs. 2 and 8 of Fukuda et al merely identify states of the apparatuses 1, as determined by the apparatus management computers 4. And it is respectfully submitted that the "operating states" clearly do not correspond to operation conditions as recited in independent claim 1, which are conditions for controlling the respective inspection/manufacturing apparatuses via the computers connected thereto.

Thus, it is respectfully submitted that Figs. 2 and 8 of Fukuda et al merely show the operation states of the apparatuses 1 and the number of lots waiting to be processed at each of the apparatuses 1, as well as, for example, whether a lot has been unloaded from the apparatus. And it is respectfully submitted that the information shown in Figs. 2 and 8 of Fukuda et al clearly does not at all correspond to the arrangement drawing and the operation conditions and/or the maintenance information displayed according to the present invention as recited in independent claim 1.

Application No. 10/798,755
Response to Office Action

Customer No. 01933

On page 5 of the Office Action, the Examiner acknowledges that Fukuda et al does not disclose intensively managing the operation conditions set to the respective inspection/manufacturing apparatus computers as a group and to change the respective operation conditions of at least a specified plurality of the inspection/manufacturing apparatuses as a group with respect to the at least one inspection/manufacturing computer corresponding to the at least a plurality of the inspection /manufacturing apparatuses. For this reason, the Examiner has cited Yanaru et al to supply the missing teachings of Fukuda et al.

It is respectfully submitted, however, that Yanaru et al merely discloses that devices for processing a part are divided into groups such that the devices within each group have minimal variations with respect to unavoidable subtle deviating inclinations. And according to Yanaru et al, the "target number of lots" may be set for each of the groups to control the number of lots allocated to each of the groups.

It is respectfully submitted that Yanaru et al does not disclose changing the respective operation conditions of at least a specified plurality of the inspection/manufacturing apparatuses as a group with respect to the at least one inspection/manufacturing computer corresponding to said at least a plurality of the inspection/manufacturing apparatuses. That is, it is

Application No. 10/798,755
Response to Office Action

Customer No. 01933

respectfully submitted that Yanaru et al does not disclose specifying a plurality of apparatuses and changing the respective operating conditions of the specified apparatuses such that when the operating conditions are changed they are changed as a group.

By contrast, it is respectfully submitted that Yanaru et al merely discloses that the grouping of the devices is determined based on unavoidable processing deviations. In addition, according to Yanaru et al, the target number of lots is simply set for an entire group. Thus, the respective operating conditions of apparatuses within the group are not changeable as according to the present invention as recited in claim 1, and the respective devices of Yanaru et al are not selectable as part of a group of apparatuses to have operating conditions changed, in the manner of the present invention as recited in claim 1.

With respect to amended claim 2, moreover, although Yanaru et al discloses that processing devices are classified into groups based on deviations in processing, it is respectfully submitted that Yanaru et al clearly does not disclose, teach or suggest that the devices have a plurality of types of inspection functions, that at least one of the inspection functions is selected, and that only the selected at least one inspection function is changed when changing the operation conditions of the at least a plurality of the inspection/manufacturing apparatuses

Application No. 10/798,755
Response to Office Action

Customer No. 01933

as a group, in the manner of the present invention as recited in claim 2.

With respect to amended claims 5 and 6, moreover, it is respectfully submitted that Fukuda et al clearly does not disclose, teach or suggest selecting at least one of the inspection/manufacturing apparatuses on the display, or displaying the specified and unspecified apparatuses in different conformations on the display, as recited in amended claims 5 and 6. In addition, it is respectfully submitted that Fukuda et al clearly does not disclose extracting and displaying the maintenance information corresponding to the at least one specified inspection/manufacturing apparatus, as recited in amended claim 6.

Finally, with respect to amended claim 9, it is respectfully submitted that, as explained hereinabove, Yanaru et al merely discloses grouping devices based on inherent variations, and setting target numbers of lots for the predetermined groupings. Therefore it is respectfully submitted that Yanaru et al clearly does not disclose, teach or suggest the features of the present invention as recited in amended claim 9 whereby the at least a plurality of inspection/manufacturing apparatuses are classified for changing the corresponding operation conditions one of: by apparatus, by apparatus category, and by inspection/manufacturing line, whereby the display section displays the operation

Application No. 10/798,755
Response to Office Action

Customer No. 01933

conditions corresponding to the classified inspection/
manufacturing apparatuses in a display column, whereby the
operation conditions are one of set and rearranged via
manipulation of the display column, and whereby the change
section rewrites the operation conditions of the classified
inspection/manufacturing apparatuses as a group.

It is respectfully submitted, moreover, that even if Fukuda
et al and Yanaru et al were combinable in the manner suggested by
the Examiner, the structural features and advantageous effects of
the present invention as recited in claims 1, 2, 5, 6 and 9 (in
addition to allowable claims 4, 8, 11 and 12) would still not be
achieved or rendered obvious.

In view of the foregoing, it is respectfully submitted that
the present invention as recited in independent claim 1, as well
as each of amended claims 2, 5, 6 and 9 depending therefrom,
clearly patentably distinguishes over the combination of Fukuda
et al and Yanaru et al under 35 USC 103, along with allowable
claims 4, 8, 11 and 12.

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Entry of this Amendment, allowance of the claims and the
passing of this application to issue are respectfully solicited.

Application No. 10/798,755
Response to Office Action

Customer No. 01933

If the Examiner has any comments, questions, objections or recommendations, the Examiner is invited to telephone the undersigned at the telephone number given below for prompt action.

Respectfully submitted,

/Douglas Holtz/

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